WHAT IS CLAIMED IS:

1. A calcium phosphate-synthetic resin composite body produced by pressing a calcium phosphate block, calcium phosphate particles, and synthetic resin particles I, which are at least partially cross-linked in advance, and uncross-linked, synthetic resin particles II while heating, said calcium phosphate block being exposed on at least part of the surface of said composite body.

2. The calcium phosphate-synthetic resin composite body as set forth in claim 1, wherein the content of said calcium phosphate particles is 80% or less by weight based on the sum of said synthetic resin particles I and II and said calcium phosphate particles.

3. The calcium phosphate-synthetic resin composite body as set forth in claim 1, wherein said synthetic resin particles are bonded to each other.

4. The calcium phosphate-synthetic resin composite body as set forth in claim 1, wherein said synthetic resin particles I and II are made of a water-insoluble acrylic or polystyrene resin.

5. The calcium phosphate-synthetic resin composite body as set forth in claim 1, wherein said calcium phosphate block and/or said calcium phosphate particles are sintered.

6. The calcium phosphate-synthetic resin composite body as set forth in claim 1, wherein said calcium phosphate block and said calcium phosphate particles are porous.

7. The calcium phosphate-synthetic resin composite body as set forth in claim 1, wherein said calcium phosphate block has a thickness of 1 mm or more.

8. The calcium phosphate-synthetic resin composite body as set forth in claim 1, wherein the content of said synthetic resin II is 0.2 to 50% by mass based on the sum of said synthetic resin particles I and II.

9. The calcium phosphate-synthetic resin composite body as set forth in claim 1, wherein a calcium/phosphorus molar ratio in said calcium phosphate block and said calcium phosphate particles is 1.4 to 2.0.

10. The calcium phosphate-synthetic resin composite body as set forth in claim 1, wherein said calcium phosphate particles have an average particle size of 0.001 to 10 mm.

11. A calcium phosphate-synthetic resin composite body produced by pressing said calcium phosphate block, synthetic resin particles I, which are at least partially cross-linked in advance, and uncross-linked, synthetic resin particles II while heating, said calcium phosphate block being exposed on at least part of the surface of said composite body.

12. The calcium phosphate-synthetic resin composite body as set forth in claim 11, wherein said synthetic resin particles are bonded to each other.

13. The calcium phosphate-synthetic resin composite body as set forth in claim 11, wherein said synthetic resin particles I and II are made of a water-insoluble acrylic or polystyrene resin.

14. The calcium phosphate-synthetic resin composite body as set forth in claim 11, wherein said calcium phosphate block is sintered.

15. The calcium phosphate-synthetic resin composite body as set forth in claim 11, wherein said calcium phosphate block is porous.

16. The calcium phosphate-synthetic resin composite body as set forth in claim 11, wherein said calcium phosphate block has a thickness of 1 mm or more.

17. The calcium phosphate-synthetic resin composite body as set forth in claim 11, wherein the content of said synthetic resin particles II is 0.2 to 50% by mass based on the sum of said synthetic resin particles I and II.

18. The calcium phosphate-synthetic resin composite body as set forth in claim 11, wherein a calcium/phosphorus molar ratio in said calcium

phosphate block is 1.4 to 2.0.

19. A method for producing the calcium phosphate-synthetic resin composite body as set forth in claim 1 comprising the steps of (a) introducing said calcium phosphate block, said calcium phosphate particles, said synthetic resin particles I and II into a cavity of a forming die such that said calcium phosphate block is present on at least part of the surface of said composite body, and that said synthetic resin particles surround said calcium phosphate particles; and (b) pressing them in said forming die cavity while heating, so that said synthetic resin particles are bonded to each other.

20. A method for producing the calcium phosphate-synthetic resin composite body as set forth in claim 11, comprising the steps of (c) introducing said calcium phosphate block and said synthetic resin particles I and II into a cavity of a forming die, such that said calcium phosphate block is present on at least part of the surface of said composite body; and (d) pressing them in said forming die cavity while heating, so that said synthetic resin particles are bonded to each other.

21. The method for producing the calcium phosphate-synthetic resin composite body as set forth in claim 19 further comprising the step of sintering said calcium phosphate block (or said calcium phosphate block and said calcium phosphate particles).

22. The method for producing the calcium phosphate-synthetic resin composite body as set forth in claim 20 further comprising the step of sintering said calcium phosphate block.

23. The method for producing the calcium phosphate-synthetic resin composite body as set forth in claim 21, wherein the sintering temperature of said calcium phosphate block and said calcium phosphate particles is 500°C to 1300°C.

24. The method for producing the calcium phosphate-synthetic resin composite body as set forth in claim 22, wherein the sintering temperature of said calcium phosphate block is 500°C to 1300°C.